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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Chen, *et al.*

Serial No.: 09/204,865

Group Art Unit: 1633

Filed: 3 December 1998

Examiner: To be assigned

For: **METHODS AND APPARATUS FOR FLOW  
THROUGH HYBRIDIZATION**

Attorney Docket No.:  
9584-0006-999

**REQUEST FOR CORRECTION OF OFFICIAL FILING RECEIPT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Enclosed please find the original filing receipt for the above-captioned application, and a copy thereof illustrating the necessary corrections in red.

(1) Inventor Roger O'Neill's name according to the application and declaration is Roger O'Neill, rather than Roger O'Neal, as listed on the Filing Receipt. Copies of the unexecuted Declaration and Title Page of the Application as filed are enclosed.

Finally, please add the correct continuing data as claim by applicant, on page 1 of the Application as filed, to read: This application is a continuation in part of U.S. patent application Serial No. 09/200,264 filed November 25, 1998. A copy of page 1 of the Application as filed is enclosed.

Applicant requests that the appropriate corrections be made, and that a new corrected filing receipt be issued.

Applicants believe that no fee is due with this Request for Correction of Filing Receipt because the incorrect data reflects a PTO error. However, please charge any required fee to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is enclosed.

Respectfully submitted,

Date February 19, 1999

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Enclosures



## METHODS AND APPARATUS FOR FLOW-THROUGH HYBRIDIZATION

### 1. CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application is a continuation-in-part of application  
Serial No. \_\_\_\_\_, filed November 25, 1998 (identified by  
attorney docket no. 9584-003-999), the content of which is  
incorporated herein in its entirety by reference.

### 2. FIELD OF THE INVENTION

10 The present invention relates to methods and apparatuses  
for flow-through capture and optional recovery of nucleic  
acids.

### 3. BACKGROUND OF THE INVENTION

15 Nucleic acid hybridization, i.e., the ability of nucleic  
acid strands of complementary sequence to form duplexed  
hybrids, is one of the most powerful analytical techniques in  
the biological sciences. One of the most widely used  
hybridization techniques today is the "Southern blot" method  
20 discovered by Southern (Southern, 1975, J. Mol. Biol. 98:503-  
507). In this method, a target denatured DNA is immobilized  
on a filter or membrane, such as a nitrocellulose or nylon  
membrane. The membrane is then incubated in a buffer solution  
which contains a labeled oligonucleotide probe complementary  
25 to a region of the immobilized target DNA under conditions  
wherein the target and probe hybridize. Following wash steps,  
the presence or absence of hybridization is determined by  
detecting the label, with a positive detection indicating the  
presence of hybridization. The above method has also been  
30 used with immobilized RNA targets. When used with RNA the  
method is called "Northern blotting."

While powerful methods, Southern and Northern blotting  
suffer from several drawbacks. First, the methods cannot be  
used to study multiple sequences simultaneously within the



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**METHODS AND APPARATUS FOR FLOW-THROUGH HYBRIDIZATION**

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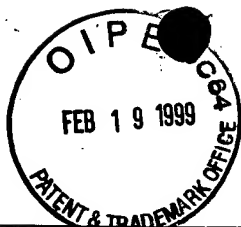
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**Attorney Docket No. 9584-006-999**

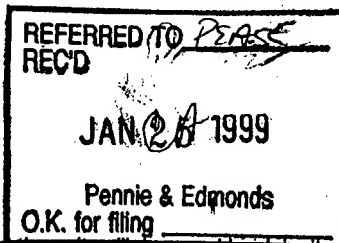
FILING RECEIPT



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
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OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
09/204,865	12/03/98	1633	\$0.00	9584-006-999	3	56	11

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*Disclosure 3/3/99*  
*CA*

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Application Processing Division's Customer Correction Branch within 10 days of receipt. Please provide a copy of the Filing Receipt with the changes noted thereon.

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TITLE

METHODS AND APPARATUS FOR FLOW-THROUGH HYBRIDIZATION ✓

PRELIMINARY CLASS: 435

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DATA ENTRY BY: ROBINSON, CARMENCITA TEAM: 02 DATE: 01/12/99

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